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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,031	01/17/2002	Henry F. Taylor		1247

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EXAMINER

MOONEY, MICHAEL P

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,031

Applicant()

TAYLOR ET AL.

Examiner

Michael P. Mooney

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-17 is/are allowed.
- 6) ☒ Claim(s) 1,9 and 18 is/are rejected.
- 7) ☒ Claim(s) 2-8, 19-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 9, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmid (5748810) and further in view of Tang et al. [i.e., Z. Tang, O. Eknayan, and H. F. Taylor, "Polarisation-Independent Electro-Optically Tunable Wavelength Filter in LiTaO₃," Electron. Lett. 30, 1758- 1759 (1994)].

Schmid teaches, in filters fabricated on a birefringent electrooptic substrate, a tunable electrooptic add-drop filter apparatus, the apparatus including:

- (a) two input single mode waveguides;
 - (b) a first beam splitter connected to said waveguides;
- a polarization converter connected to each of said waveguides (See: fig. 4).

Schmid does not explicitly teach a polarization converter connected to each of said waveguides after said first beam splitter wherein each said polarization converter includes more than one set of spaced apart, spatially periodic, strain-inducing pads. These limitations, however, are taught by Tang et al. (see fig. 1, items substrate, electrodes and strips; page 1578, first column, last paragraph-page 1759, first column). Thus, Tang et al. provides improvement for phase match polarization conversion (page 1758, first column, 5th paragraph). Thus, it would have been obvious to person of ordinary skill in the art when the invention was made to modify Schmid's optical tunable filter's stripes 60, 61, 50, 51 and combine with that of Tang et al. (strain pads) in order to produce an optical filter that includes the above limitations, since the resultant optical filter system would balance optical paths (col. 1, lines 5-6) and would allow reconfiguration of optical network without altering the cabling of the components (col. 1, lines 42-45).

Furthermore, Schmid teaches (d) electrodes in proximity to each said polarization converter; (e) second beam splitter connected to said waveguides after said polarization converter; and (g) two output single mode waveguides connected to said second beam splitter. (fig. 4, items 20/21; col. 8, lines 10-34; col. 10 lines 5-16).

Thus claim 1 is rejected.

Additionally, the apparatus of claim 1 further comprising a voltage tuner connected to said electrodes would have been obvious because it is notoriously well

known (NWK) to do this in such devices for the purpose of enhancing electrooptic control of the device(s). Thus claim 9 is rejected.

By the reasons/references given above each and every element of method claim 18 is also rendered obvious. If Applicant disagrees with this obviousness holding, then Applicant should submit evidence showing this obviousness holding is errant. Examiner will then consider restricting.

Allowable Subject Matter

Claims 10-17 are allowed.

Claims 2-8, 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 703-308-6125. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 703-308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7721 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956. An alternative useful number for status inquiries is 703-306-3329.


Michael P. Mooney
Examiner
Art Unit 2877


Frank G. Font
Supervisory Patent Examiner
Art Unit 2877

FGF/mpm
11/25/03